Groups	HL	Progression		Overall Mortality	
	N	HR (95% CI)	p-value	HR (95% CI)	p-value
BEAM	313	1.00	-	1.00	-
CBV^{low}	279	1.12 (0.85-1.47)	0.43	1.53 (1.16-2.02)	0.003
CBV^{high}	219	0.95 (0.71-1.28)	0.74	1.54 (1.15-2.05)	0.003
BuCy	162	1.52 (1.13-2.05)	<0.001	1.77 (1.30-2.43)	<0.001
TBI	23	1.94 (1.09-3.45)	0.024	3.39 (2.03-5.64)	<0.001

to 8% and did not differ across regimens in multivariate analysis. There were a significant interaction between regimens and disease (HL and NHL). For patients with NHL, there was no significant difference in outcomes with BEAM, CBV^{low}, BuCy, and TBI. In contrast, NHL patients treated with CBV^{high} had higher progression (HR 1.28 [1.08, 1.50], p=0.003), and mortality (HR 1.27 [1.08, 1.49], p=0.003). For patients with HL, BuCy and TBI were associated with higher progression at 3 years compared to BEAM (47%, 57% vs. 36%) and shorter overall survival (65%, 47% vs. 79%). Multivariable results for HL are demonstrated in the table.

Conclusion: The impact of specific high-dose regimens with AutoHCT on overall outcomes appears to be different in patients with NHL and HL. Use of CBV^{high} in patients with NHL and BuCy or TBI-containing regimens in HL were associated with worse outcomes compared to BEAM. Future investigation should be geared towards guiding the choice of regimen based on specific patient and disease characteristics.

37

A Comparative Study of the Outcome of Isolated Chromosome 13q and Clonal Progression Detected By I-FISH Do Additional Cytogenetic Abnormalities Impact Survival in Multiple Myeloma

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Background: Chromosomal abnormalities detected by interphase fluorescence in situ hybridization (I-FISH) are an important prognostic marker in patients with multiple myeloma (MM). Isolated chromosome 13q has been considered standard risk when identified by I-FISH and high risk by conventional cytogenetics. The impact of additional cytogenetic abnormalities with chromosome 13q identified by I-FISH in regards to prognosis has not been fully defined. In this report, we describe the outcome of patient's with multiple myeloma with isolated chromosome 13q and 13q+ (additional cytogenetic abnormalities) identified by I-FISH at our institution between January 2003 and January 2013 and had I-FISH analysis prior to treatment.

Methods: The primary objective was to compare patient's outcomes in regards to response, time to progression, and overall survival between patients who had an isolated 13q and 13q+ identified by I-FISH in the bone marrow plasma cells. Kaplan & Meier curves were generated to calculate overall survival (OS) between the two groups.

Results: Between January 2003 and January 2013, we identified 76 patients by I-FISH who had either an isolated 13q or 13q+ in patients with multiple myeloma (Patient characteristics Table 1). Of the patients with an isolated 13q abnormality 33% received a bortezomib-based regimen and 38% in the 13q+ group. Of the patient's with a isolated 13q 38% went onto receive high dose chemotherapy followed by autologous ASCT while 20% with a 13q+ received ASCT.

Table 1
Patient Characteristics and Outcome

	13q (n=42)	13q+ (n=34)
Age (years)	65 (88-44)	13q+ (n=34)
Gender		
Male	19 (45%)	15
Female	23 (55%)	19 (55%)
Race		
White	13 (30%)	11 (32%)
African American	27 (65%)	20 (60%)
Other	2	3
International Staging System at diagnosis		
I	5 (15%)	
II	3 (7%)	4 (12%)
III	26 (62%)	30 (88%)
Plamacytoma	9 (21%)	12 (35%)
Bortezomib based Induction		
Regimen	14 (33%)	13 (38%)
Conditioning regimen Melphlan	16 (38%)	7 (20%)
IgG	21 (51%)	19 (56%)
IgA	8 (20%)	9 (26%)
IgM	4 (9%)	
Mortality	13 (31%)	21 (62%)
Overall survival	65%	25%

African American patients with 13q consisted of 65% and 60% with 13q+ in our patient population. For the 13q or 13q+ who underwent high dose chemotherapy followed by ASCT OS was 85% compared to the non-transplant group 45% (p=0.01) (Figure 2). On follow up at a median of 2.5 years mortality occurred in 31% of the 13q patients compared to 62% in the 13q+ group. The overall survival at 5 years was 25% in the 13q+ group compared to 65% in the patient's with an isolated 13q, With the 13q+ group having an overall poor OS (p=0.03)

Conclusion: Patients who harbor the 13q and additional cytogenetic abnormalities identified by I-FISH have a significant worse outcome compared to patients with an isolated 13q. These patients should be considered high risk and consideration for treatment with novel agents and autologous stem cell transplant followed by post-transplant maintenance therapy should be considered.

38

Impact of Hepatitis B Core Antibody (HBcAb) Seropositivity on the Outcome of High-Dose Chemotherapy and Autologous Hematopoietic Stem Cell Transplantation for Multiple Myeloma

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Background: Hepatitis B core antibody (HBcAb) seropositivity has been associated with a higher rate of hepatitis B reactivation after chemotherapy, even in patients who are hepatitis B surface antigen (HBsAg)-negative. We evaluated the incidence of hepatitis B reactivation and liver toxicity in patients with multiple myeloma (MM) who received high-dose chemotherapy (HDC) and autologous hematopoietic stem cell transplantation (auto-HCT) at our institution.